

Claims

5 1. Device for temperature control in an aircraft cabin (104), comprising
- a first supply control arrangement for controlling the supply of heated air from
a first source in a first temperature area (106) of the aircraft cabin (104) depending
on a specified first temperature for the first temperature area, and
- a first pressure control arrangement (176) for controlling a current pressure in
10 the first supply control arrangement in the event of a malfunction of the first supply
control arrangement depending on the specified first temperature.

15 2. Device according to Claim 1, comprising
- the first supply control arrangement for controlling the supply of heated air
from the first source into a second temperature area (108) of the aircraft cabin (104)
depending on a specified second temperature for the second temperature area, and
- the first pressure control arrangement (176) for controlling a current pressure
in the first supply control arrangement in the event of a malfunction of the first
supply control arrangement depending on the specified second temperature.

20 3. Device according to one of the previous claims, comprising
- a second supply control arrangement (178) for controlling the supply of
heated air from a second source in a third temperature area (107) of the aircraft
cabin (104) depending on a specified third temperature for the third temperature
25 area, and
- a second pressure control arrangement (178) for controlling a current pressure
in the second supply control arrangement in the event of a malfunction of the second
supply control arrangement depending on the specified third temperature.

30 4. Device according to Claim 3, comprising
- the second supply control arrangement (178) for controlling the supply of
heated air from the second source in a fourth temperature area (109) of the aircraft
cabin (104) depending on a specified fourth temperature for the fourth temperature
area, and
35 - the second pressure control arrangement (178) for controlling a current
pressure in the second supply control arrangement in the event of a malfunction of

the second supply control arrangement depending on the specified fourth temperature.

5. Device according to one of the previous claims, wherein

the supply control arrangement comprises an air intake (181,183, 245, 249), which is connected to the corresponding pressure control arrangement (176,178), an air outlet which is connected to the corresponding temperature area, and an air duct (82,244, 248), which is connected between the air intake and the air outlet.

10. 6. Device according to Claim 5, wherein

the air outlet comprises air outlet ducts (142-156, 212-226), which are associated to temperature zones (110-124,194-208) of the corresponding temperature area.

15. 7. Device according to Claim 5 or 6, wherein

the supply control arrangement comprises a valve arrangement for the temperature-dependent supply of heated air to the corresponding temperature area (106-109), which valve arrangement is disposed at the corresponding air outlet (142-156, 212-226).

20. 8. Device according to Claim 7, wherein

the valve arrangement comprises valves (138-172, 228-242) for the temperature-dependent supply of heated air to the corresponding temperature area (110-124,194-208), which valves (142-156, 212-226) are disposed in each of the corresponding air outlet ducts (142-156, 212- 226) of the corresponding temperature area (106-109).

25. 9. Device according to one of the previous claims, wherein

an operating status detecting arrangement is associated to the supply control arrangement for detecting a current operating status of the corresponding supply control arrangement.

30. 10. Device according to one of the previous claims, comprising

a pressure detecting arrangement (177,179) for detecting a current pressure in the corresponding supply control arrangement, which pressure detecting

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arrangement (177,179) is connected to the pressure control arrangement (176,178) and is disposed in the corresponding supply control arrangement.

11. Device according to one of the Claims 3 to 10, comprising
5 a connecting arrangement (188, 252) for selective connection between the first supply control arrangement and the second supply control arrangement.

12. Device according to one of the previous claims, wherein
10 the supply control arrangement comprises a shut-off arrangement (190, 192, 246, 250) in order to prevent airflow upstream in the direction from the corresponding temperature area to the corresponding pressure control arrangement (176,178).

13. Method for controlling temperature in an aircraft cabin, wherein
15 - the supply of heated air from a first source into a first temperature area of the aircraft cabin is controlled depending on a specified first temperature for the first temperature area, and
- in the event of a malfunctioning air supply control in the first temperature area, a current pressure of air supplied from the first source is controlled depending upon the specified first temperature.

20 14. Method according to Claim 13, wherein
- the supply of heated air from the first source into a second temperature area of the aircraft cabin is controlled depending upon a specified second temperature for the second temperature area, and
25 - in the event of a malfunctioning air supply control in the second temperature area, a current pressure of air supplied from the first source is controlled depending upon the specified second temperature.

30 15. Method according to Claim 13 or 14, wherein
- the supply of heated air from a second source into a third temperature area of the aircraft cabin is controlled depending upon a specified third temperature for the third temperature area, and
- in the event of a malfunctioning air supply control in the third temperature area, a current pressure of air supplied from the second source is controlled depending upon the specified third temperature.

35 16. Method according to Claim 15, wherein

- the supply of heated air from the second source into a fourth temperature area of the aircraft cabin is controlled depending upon a specified fourth temperature for the fourth temperature area, and
- in the event of a malfunctioning air supply control in the fourth temperature area, a current pressure of air supplied from the second source is controlled depending upon the specified fourth temperature.

5 17. Method according to one of the claims 13 to 16, wherein
the air supply control to a corresponding temperature area is brought about by valve-controlled means.

10 18. Method according one of the claims 13 to 17, wherein
the air supply is brought about into temperature zones of the corresponding temperature area.

15 19. Method according one of the claims 13 to 18, wherein
the air supply control is monitored in order to detect a malfunctioning air supply control.

20 20. Method according one of the claims 14 to 20, wherein
a current air pressure is detected for the purpose of air supply control.

25 21. Method according one of the claims 14 to 21, wherein
- in the event of a malfunctioning supply control of heated air from the first source and/or a malfunctioning control of the pressure for air supplied from the first source, the supply of heated air from the first source is at least partly replaced by a supply of air from the second source, or
- in the event of a malfunctioning supply control of air from the second source and/or a malfunctioning pressure control for air supplied from the second source, the supply of air from the second source is at least partly replaced by a supply of air from the second source.